**NC Climate Fellows Technology Guide**

*Prior to coming to the June 19-21 Summer Institute please do the following to get your laptop ready.*

**DOWNLOAD**

1. [Google Earth](http://www.google.com/earth/download/ge/agree.html)

Make sure you have the latest version downloaded.

1. [NetLogo’s Climate Change Model](http://ccl.northwestern.edu/netlogo/models/ClimateChange)

Make sure you can either run this application in your web browser or download the application.

1. [Java](http://www.java.com/en/) must be installed and enabled on your computer

**BOOKMARK THE FOLLOWING WEBSITES**

The following websites will be explored during the summer institute; please go ahead and access and then bookmark these sites; links to these sites will also be available via the Climate Fellows [wikispace](http://climatefellows2012.wikispaces.com).

1. [Climate Perspectives](http://www.sercc.com/perspectives)

This tool from the Southeast Regional Climate Center places recent weather conditions in both a historical and geographical perspective.

1. [GIOVANNI](http://gdata1-ts1.sci.gsfc.nasa.gov/daac-bin/G3/gui.cgi?instance_id=DICCE-G&gsid=__1306256266&selectedWSID=&app=&selectedMap)

This NASA website provides selected Giovanni data sets for investigating climate change by educators and students.

1. [Climate and Health ANalysis for Global Education Viewer](http://www.climatechangehumanhealth.org/changeviewer/) (CHANGE Viewer)

CHANGE Viewer allows the exploration of climate science, human and socio-economic datasets made available through the Data Library.

[**NASA’s Global Climate Change Website**](http://climate.nasa.gov/)

1. [NASA’s Climate Time Machine](http://climate.nasa.gov/ClimateTimeMachine/climateTimeMachine.cfm)

This series of visualizations from NASA allows users to track changes over time in sea ice extent, sea level, CO2 emissions and average global temperature. A favorite of teachers!

1. [NASA’s Sea Level Viewer](http://climate.nasa.gov/SeaLevelViewer/seaLevelViewer.cfm)

Learn about NASA missions to study sea level and watch a short tutorial explaining sea level relevant to four events: Hurricane Katrina, Indian Ocean Tsunami, La Nina (1999), El Nina (1997).

1. [NASA’s Global Ice Viewer](http://climate.nasa.gov/GlobalIceViewer/index.cfm)

Visualize how climate change has affected glaciers, sea ice, and continental ice sheets worldwide.

1. [NASA’s Eyes on the Earth](http://climate.nasa.gov/Eyes/)

Learn about NASA’s satellite missions and how they collect data bout the Earth’s land, oceans and atmosphere. View recent data and satellite images.

1. [NASA’s State of Flux Images of Change](http://climate.nasa.gov/sof/#Icemelt.jpg)

Each week a different location on planet Earth is visually featured, showing change in that location over time. Some of these effects are related to climate change, others document the effects of urbanization, or the ravage of natural hazards such as fires and floods.

1. [Climate Reel](http://climate.nasa.gov/imagesVideo/climateReel/)

A collection of NASA's best videos and visualizations of climate change

1. [NASA’s Earth Observatory](http://earthobservatory.nasa.gov/)

Browse images of the day and global maps by topic and/or feature year. Topical fact sheets are also available for download as pdfs.

1. [NASA’s Earth Observations](http://neo.sci.gsfc.nasa.gov/Search.html)

Search for and retrieve satellite images of Earth. Download them; export them to Google Earth; perform basic analysis.

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**Advanced NASA Resources & Access to NASA Data Sets (Optional)**

1. [MyNASA Data](https://mynasadata.larc.nasa.gov/index.html)

This website makes NASA Earth Science data accessible to the K-12 and citizen scientist communities via NASA’s [Live Access Server](https://mynasadata.larc.nasa.gov/las3/getUI.do) (LAS). “Microsets” of data have been created from large scientific data sets and combined with tools, lesson plans, and supporting documentation so that a teacher can use in the classroom. The LAS link titled [*Time Coverage at a Glance*](https://mynasadata.larc.nasa.gov/ParmTime.html)shows the data parameters available for a given time periods.

1. [NASA’s Earth Observing System Data and Information System (EOSDIS)](http://earthdata.nasa.gov/)

Search and access selected earth science data sets and data collections.

1. [NASA’s Socioeconomic Data and Applications Center (SEDAC)](http://sedac.ciesin.columbia.edu/)

SEDAC focuses on human interactions in the environment. Its mission is to develop and operate applications that support the integration of socioeconomic and Earth science data and to serve as an "Information Gateway" between the Earth and social sciences.

1. [NASA’s Global Change Master Directory](http://gcmd.nasa.gov/)

Search for Earth and environmental science data sets by topic. Ancillary information including descriptions of instruments and platforms is also available.

1. [MODIS](http://daac.ornl.gov/cgi-bin/MODIS/GLBVIZ_1_Glb/modis_subset_order_global_col5.pl)

MODIS (or Moderate Resolution Imaging Spectroradiometer) is a key instrument aboard the Terra (EOS AM) and Aqua (EOS PM) satellites. Enter latitude and longitude coordinates to acquire a variety of data sets for a specific region of the Earth during specific time periods.

**iPad Apps (Optional)**

The following free apps are available for iPad and can be explored during the workshop.

1. [NASA’s Visualization Explorer](http://itunes.apple.com/us/app/nasa-visualization-explorer/id448700202?mt=8)

# [NOAA's Arctic Watch](http://itunes.apple.com/app/arctic-watch/id349881996?mt=8) *Access to Arctic data is free*

1. [Skeptical Science](http://itunes.apple.com/us/app/skeptical-science/id353938484?mt=8)
2. [Climate Mobile](http://itunes.apple.com/us/app/climate-mobile/id388928572?mt=8)